

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) In a system for providing data content to and from a plurality of mobile platforms, each of the mobile platforms transmitting a return link emission having an effective isotropic radiated power (EIRP) EIRP to a predetermined location via a satellite-mounted transponder, a method for controlling an EIRP of the aggregate return link emissions of the mobile platforms, the method comprising the steps operations of:

determining a probability distribution of the EIRP of the return link emission for each of the mobile platforms;

determining a probability distribution of the EIRP for the aggregate return link emissions using the probability distributions of the EIRP of the return link emission for each of the mobile platforms; and

determining an aggregate off-axis EIRP density envelope for a predetermined probability level and the probability distribution of the EIRP for the aggregate return link emissions.

2. (Currently Amended) The method of Claim 1, wherein the probability distribution of the EIRP for at least one return link emission is determined numerically.

3. (Currently Amended) The method of Claim 2, wherein a plurality of Monte Carlo trials are employed to numerically determine the probability distribution of the EIRP of the at least one return link emission.

4. (Currently Amended) The method of Claim 3, wherein 30 Monte Carlo trials are employed to numerically determine the probability distribution of the EIRP of the at least one return link emission.

5. (Currently Amended) The method of Claim 1, wherein the probability distribution of the EIRP for at least one return link emission from one of said mobile platforms is determined analytically.

6. (Currently Amended) The method of Claim 5, wherein further comprising assuming that each error source present in the system is assumed to be normal and the has a probability distribution that is the square root of the sum of the squares of each of a plurality of individual error distributions.

7. (Currently Amended) The method of Claim 1, wherein the step operation of determining a probability distribution of the EIRP for the aggregate return link emissions includes the step operation of scaling each of the EIRP of the return link probability distributions by a scaling fraction that is equal to the actual EIRP of the return link divided by the peak EIRP of the return link.

8. (Currently Amended) The method of Claim 1, wherein the step operation of determining the probability distribution of the aggregate off-axis EIRP density envelope includes the steps of:

determining a mean value of the aggregate off-axis EIRP probability;

determining a standard deviation of the aggregate off-axis EIRP probability; and

calculating the a probability distribution of the aggregate off-axis EIRP density envelope by adding the mean value to the product of the standard deviation and a predetermined value that is associated with the predetermined probability level.

9. (Original) The method of Claim 1, wherein the predetermined probability level is at least 99.7%.

10. (Original) The method of Claim 9, wherein the predetermined probability level is at least 99.9%.

11. (Currently Amended) The method of Claim 1, further comprising the ~~step~~
operation of controlling the mobile platforms such that the EIRP of the aggregate return link emissions is within the aggregate off-axis EIRP density envelope at the predetermined probability level.

12. (Currently Amended) In a system for providing data content to and from a plurality of mobile platforms, each of the mobile platforms transmitting a return link emission having an EIRP to a predetermined location via a satellite-mounted transponder, a method for controlling an effective isotropic radiated power (EIRP) EIRP of the aggregate return link emissions of the mobile platforms, the method comprising the ~~steps~~
operations of:

determining a probability distribution of the EIRP of the return link emission for each of the mobile platforms;

scaling each of the EIRP of the return link emission probability distributions by a scaling fraction that is equal to the actual EIRP of the return link emission divided by the peak EIRP of the return link emission;

determining a probability distribution of the EIRP for the aggregate return link emissions using the probability distributions of the EIRP of the return link emission for each of the mobile platforms; and

determining an aggregate off-axis EIRP density envelope for a predetermined probability level and the probability distribution of the EIRP for the aggregate return link emissions; and

controlling the mobile platforms such that the EIRP of the aggregate return link emissions is within the aggregate off-axis EIRP density envelope at the predetermined probability level.

13. (Currently Amended) The method of Claim 12, wherein a plurality of Monte Carlo trials are employed to numerically determine the probability distribution of the EIRP of ~~the~~ at least one said return link emission from one of said mobile platforms.

14. (Currently Amended) The method of Claim 13, wherein about 30 Monte Carlo trials are employed to numerically determine the probability distribution of the EIRP of the at least one return link emission.

15. (Currently Amended) The method of Claim 12, wherein the step operation of determining the probability distribution of the aggregate off-axis EIRP density envelope includes the steps operations of:

determining a mean value of the aggregate off-axis EIRP probability;

determining a standard deviation of the aggregate off-axis EIRP probability; and

calculating the probability distribution of the aggregate off-axis EIRP density envelope by adding the mean value to the product of the standard deviation and a predetermined value that is associated with the predetermined probability level.

16. (Currently Amended) The method of Claim 12, wherein the step operation of determining the probability distribution of the aggregate off-axis EIRP density envelope includes the steps operations of:

determining a mean value of the aggregate off-axis EIRP probability;

determining a standard deviation of the aggregate off-axis EIRP probability; and

calculating the probability distribution of the aggregate off-axis EIRP density envelope by adding the mean value to the product of the standard deviation and a predetermined value that is associated with the predetermined probability level.

17. (Original) The method of Claim 12, wherein the predetermined probability level is at least 99.7%.

18. (Original) The method of Claim 17, wherein the predetermined probability level is at least 99.9%.

19. (Currently Amended) In a system for providing data content to and from a plurality of mobile platforms, each of the mobile platforms transmitting a return link having an effective isotropic radiated power (EIRP) EIRP to a predetermined location via a satellite-mounted transponder, a method for controlling an EIRP of the aggregate return link emissions of the mobile platforms, the method comprising the steps operations of:

determining a probability distribution of the EIRP of the return link emission for each of the mobile platforms, each of the probability distributions being determined numerically through a plurality of Monte Carlo trials;

scaling each of the EIRP of the return link probability distributions by a scaling fraction that is equal to the actual EIRP of the return link emission divided by the peak EIRP of the return link emission;

determining a probability distribution of the EIRP for the aggregate return link emissions using the probability distributions of the EIRP of the return link emission for each of the mobile platforms;

determining a mean value of the aggregate off-axis EIRP probability;

determining a standard deviation of the aggregate off-axis EIRP probability;

calculating a probability distribution of an aggregate off-axis EIRP density envelope by adding the mean value to the product of the standard deviation and a predetermined value that is associated with a predetermined probability level; and

controlling the mobile platforms such that the EIRP of the aggregate return link emissions is within the aggregate off-axis EIRP density envelope at the predetermined probability level.

20. (Original) The method of Claim 19, wherein the predetermined probability level is at least 99.7%.